BASALITE

A simplified prefabricated unit system of light-weight insulating reinforced concrete.

Before you decide on the material of which you are to build your home, check and see if it has all the necessary qualities demanded in modern construction.

Is it fireproof and permanent?

Can it be completely reinforced in a simple way?

Does it provide an easy and practical way for the installation of plumbing and wiring?

Is it insulating against heat, cold and sound?

Does it have perfect nailing qualities?

Has it unlimited decorative possibilities?

Does it give you warm, dry, rigid floors, free from sagging and squeaking?

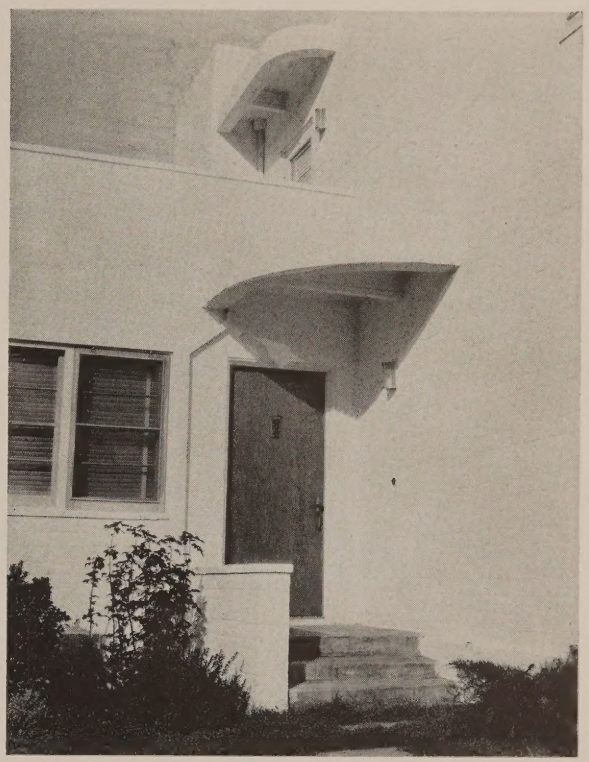
Is it positively termite and rot-proof?

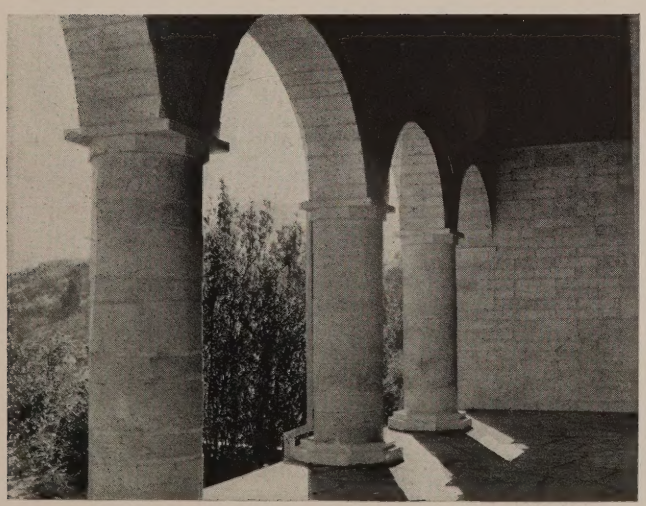
Does it give you complete freedom of architectural design?

Are the insurance and upkeep costs low?

Are all the above qualities combined in one material?

Does it exemplify the highest construction standards and yet be economical enough to be used in the most modest cottage?





Whatever you are planning to build, you owe it to yourself to personally investigate Basalite and find out that you can write "YES" in answer to every one of these questions. Basalite products are a complete line of prefabricated, light-weight, concrete building materials. These products include, virtually, every necessary part of the average building. Basalite is now being used all over central and northern California in building homes, stores, apartments, factories, etc. Because of its light weight, it may be economically shipped anywhere in California.

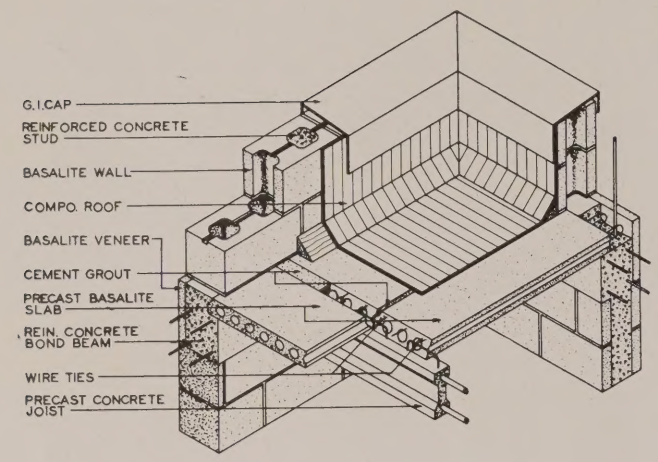
Basalite is manufactured in a new and modern plant under scientific control, using modern machines of the latest design.

BASALT ROCK COMPANY, INC., NAPA, CALIFORNIA

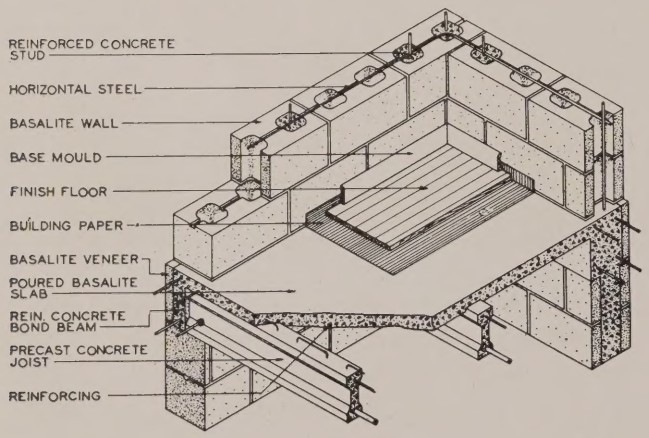
Manufacturers and Distributors

BASALITE LIGHT-WEIGHT REINFORCED

• • • • *Manufactured by BASALT ROCK*



"A"



"B"

WALLS: Typical wall construction, as shown in details, are of Basalite, light-weight concrete units. These units are so designed that all cells are superimposed, permitting the placement of reinforced concrete columns within the wall at predetermined intervals. These cells also provide means for electrical wiring and plumbing within the wall.

Horizontal reinforcing steel is placed within the wall at uniformly spaced intervals in the mortar joint during the process of construction in such a manner that they intersect the vertical, poured-in-place, reinforced concrete columns which will be placed within the wall as already stated.

Standard units manufactured are 4″ and 8″ high, 8″ and 16″ long and 4″, 6″ and 8″ thick. The units for 12″ thick walls are 8″ high, 12″ thick and 24″ long. Split units are provided to simplify masonry work around heating ducts, plumbing pipes, etc. Standard jamb units are made in all sizes for both metal and wood window and door frames. Trough units are used for providing a form for the bond beam and to conceal same within the wall as indicated in "C." Veneer units are made in all standard sizes and are used for concealing the horizontal bond beam within the wall when concrete joists are used.

FLOORS: Floor construction, as indicated in "B," is of prefabricated, reinforced, concrete joists made to specified lengths, depths, and reinforcing steel requirements according to span and load demands for each individual job. Basalite, nailable, reinforced, concrete floor slabs, either the monolithic, poured-in-place method, or the hollow precast type, may be used. "B" indicates the monolithic slab, while "A" indicates the precast slab, grouted together at the joints.

Another method for firesafe, permanent floor construction

REVIEW AND INTERPRETATION
ABBOT A. HANKS TESTS OF BASALITE UNIT LINTELS

By Walter T. Steilberg
Consulting Architect

Basalite unit wall construction has been thoroughly tested (see P.C.B.O.C. reports and rulings, May 13, 1938) but this program did not include the testing of composite lintels made by laying a course or two courses of units of special form with main and secondary reinforcement and with the unit hollows filled with concrete. There is a dearth of test information on such composite members and such tests as have been made are tests of composite beams of hollow tile units and concrete. (See Bureau of Standards Research Paper #181, June, 1930.) The following series of tests, therefore, was made to determine the behavior of beams composed of machine-made pumice concrete blocks with the cells filled with standard concrete and with main reinforcing top and bottom and shear reinforcing in the form of hooks passed through the unit hollows.

The specimens were of two types, Type I being composed of a single course, giving a beam depth of about 8" and with a span of about 4'8" andthe other consisting of two single courses giving a depth of 16" and having a span of 8'8". The reinforcing in both cases was such as could be easily installed on the job; and that in the one-course lintel was such as would be provided by the continuation of the standard tie beam steel supplemented by an extra bar over an opening.

As indicated in the load-deflection graphs accompanying the Abbot Hanks report, the most remarkable result of the tests was the consistency of behavior of both types of specimens. This consistency of results obtained with specimens of very different proportions and spans, coupled with the consistent results, which were obtained in the Basalite unit wall tests for the P.C.B.O.C., indicate that certain design assumptions may fairly be made. While the cracks which developed at the ultimate load are evidently shear cracks and might have been postponed by heavier shear reinforcement, the load-deflection graphs within working stresses,--say about 1/4 of ultimate, are practically straight lines in all cases. If it is assumed that these composite beams act within this range in the same manner as monolithic beams of the same cross-section, these unit stresses in the beams would be as follows: (neglecting effect of the very small percentage of compressive reinforcements in the tops of beams).

Specimen			One-fourth	Mom.in	Unit Stresses			
Type	No.	Sec.	Span	Ult.Load	In.Kips	Steel	Compr'n	Shear	Deflection
I	3	8 x 8	4'8"	3,500	26.5	14,000	470	39#	.024
I	4	8 x 8	4'8"	3,500	26.5	14,000	470	39#	.014
II	1	8 x16	8'8"	5,150	67.	13,200	240	21#	.068
II	2	8 x16	8'8"	4,500	58.	11,600	210	24#	.057

Comparison of ultimate resisting moments developed by specimens with computed resisting moments for monolithic beams of the same size and steel area (considering steel as stressed beyond elastic limit to 50,000#):

CONCRETE MASONRY CONSTRUCTION

COMPANY, INC. Napa, California

is shown in "D." This method is frequently used in low cost home construction.

ROOFS: Roof construction as indicated in "A" is used on buildings designed with flat roofs or where complete fire-safety is desired. Where roofs are constructed, as shown in "C," Basalite, firesafe, insulating shingle tile are used.

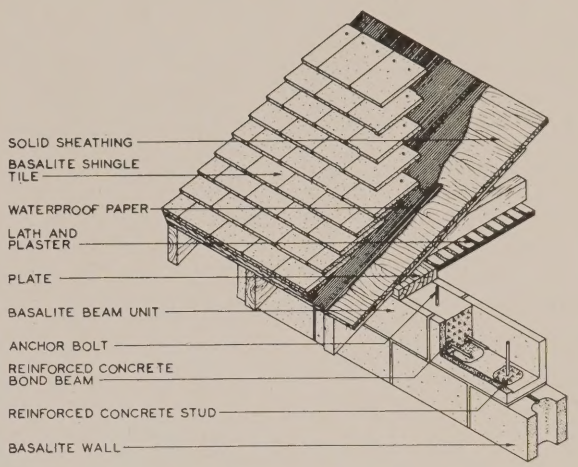
WALL FINISHES: Basalite provides an unlimited number of ways for interior and exterior treatment. Its surface texture makes a perfect mechanical bond for plaster and therefore does not require any other plaster base. Plaster application may either be smooth troweled or textured. Decorative possibilities directly on Basalite walls are numerous. Paint may be applied directly to the walls in single color tones or glazed over, giving a two-tone effect, or they may be stained in various shades.

Basalite walls are beautiful in their natural state and are frequently left that way.

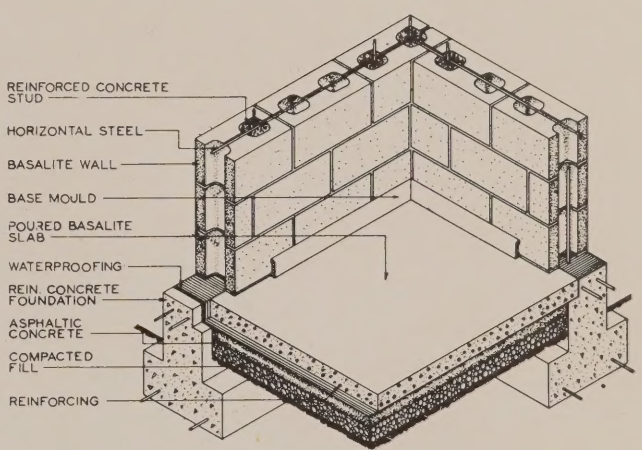
Exterior walls, left natural, are covered with clear waterproofing. Otherwise waterproof paints or stuccos are used. Wood trim is always nailed directly to the Basalite.

FLOOR FINISHES: Because Basalite floors are nailable, wood finish floors may be nailed to them. Linoleum or tile floors may be cemented on, or Basalite itself may be the finish floor by simply staining, sealing and waxing.

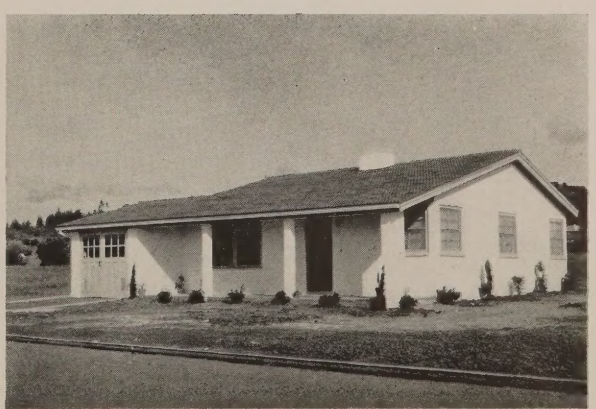
GENERAL COMMENT: Basalite is unique because it incorporates in one single material most of the essential qualities demanded in modern construction. Some of the most important characteristics are permanence, fireproofness, light-weight, insulation, nailability, termite proofness, structural stability, flexibility in design and economy of construction.

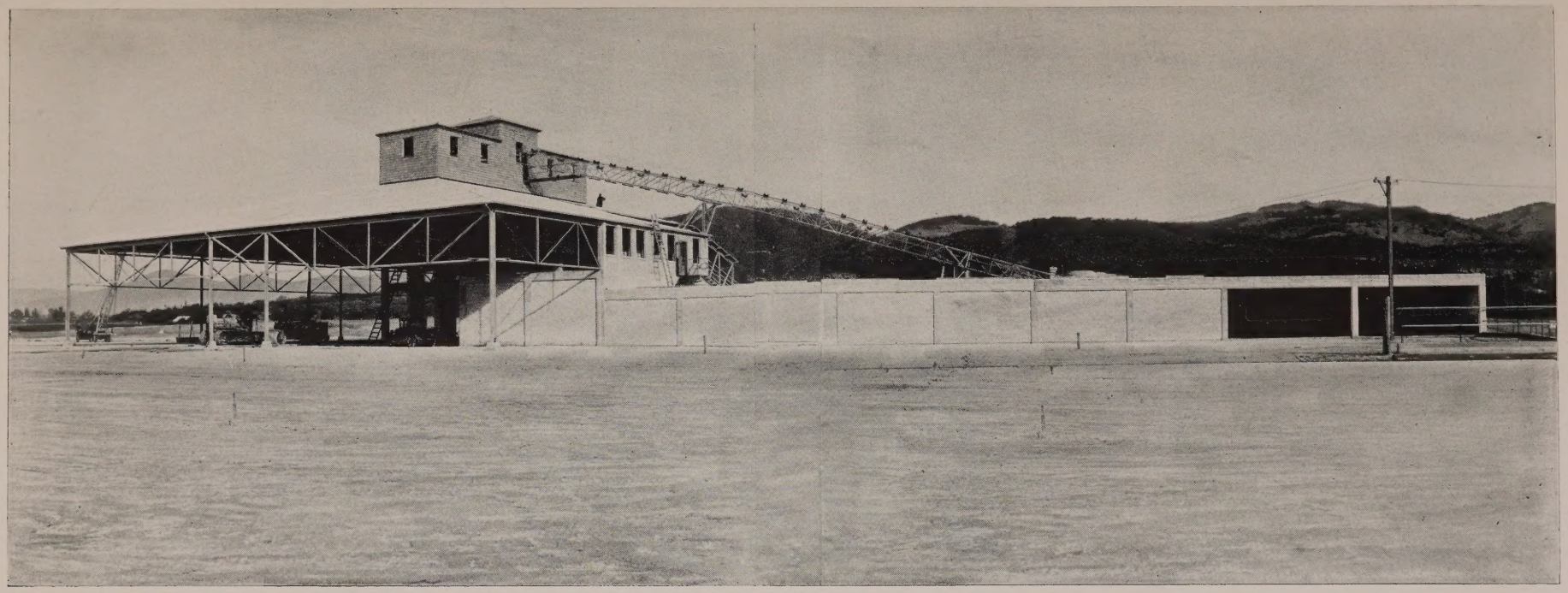


"C"



"D"





Our New Concrete Products Plant at Napa, California

THE very latest in concrete products manufacturing is envisioned in this new plant just completed near Napa, California, by Basalt Rock Company, producers of "Basalite" a light-weight, nailable, insulating concrete which is fabricated into a complete line of building products.

The Basalt Rock Company, firm in the belief that by developing concrete products of unusual qualities, and foreseeing the demand for more permanent and economical building materials, began several years ago in a modest way to manufacture precast building units made of a natural cellular, light-weight, mineral aggregate in combination with Portland cement. This type of aggregate has been in common use for many years in the manufacture of concrete building materials in Germany and today is a business of major importance.

Recognizing the need for scientific control of manufacturing processes, and the elimination of crude and uncertain manufacturing methods which have been a hindrance to a more universal use of prefabricated concrete, the Basalt Rock Company has installed in this new plant, automatic equipment of the latest design. This equipment will not only give the complete assurance of high standards of quality but also greatly increase the production capacity of the company so as to meet the increasing demand for concrete products in buildings of all kinds.

Among the wide variety of buildings already constructed of Basalite are homes (ranging in price from $2,000 to $50,000), apartment houses, stores, factories wineries, dehydrators, cold storage plants, etc., and is an indication of the demand already created and the diversified uses of Basalite.